



DEPARTMENT OF TRANSPORTATION

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## National Highway Traffic Safety Administration

[Docket No. NHTSA-2022-0018]

### Agency Information Collection Activities; Submission to the Office of Management and Budget for Review and Approval; Request for Comment; Title: FMVSS Considerations for Vehicles with Automated Driving Systems: Seating Preference Study

**AGENCY:** National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

**ACTION:** Notice and request for comments on a request for approval of a new information collection.

**SUMMARY:** In compliance with the Paperwork Reduction Act of 1995 (PRA), this notice announces that the Information Collection Request (ICR) summarized below will be submitted to the Office of Management and Budget (OMB) for review and approval. The ICR describes the nature of the information collection and its expected burden. This is a new collection of information to conduct an experiment to gather both objective and subjective data regarding occupant/passenger seat preference in Automated Driving System-Dedicated Vehicles (ADS-DVs). A Federal Register Notice with a 60-day comment period soliciting comments on the following information collection was published on March 7, 2022. No relevant comments were received.

**DATES:** Comments must be submitted on or before [INSERT DATE 30 DAYS AFTER THE DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** Written comments and recommendations for the proposed information collection, including suggestions for reducing burden, should be submitted to the Office of Management and Budget at [www.reginfo.gov/public/do/PRAMain](https://www.reginfo.gov/public/do/PRAMain). To find this particular information collection, select “Currently under Review – Open for Public Comment” or use the search function.

**FOR FURTHER INFORMATION CONTACT:** For additional information or access to background documents, contact Debbie Sweet, Office of Vehicle Safety Research (NVS-010), (202) 366-7179, National Highway Traffic Safety Administration, W46-413, U.S. Department of Transportation, 1200 New Jersey Avenue, SE, Washington, DC 20590.

**SUPPLEMENTARY INFORMATION:**

Under the PRA (44 U.S.C. 3501 *et seq.*), a Federal agency must receive approval from the Office of Management and Budget (OMB) before it collects certain information from the public and a person is not required to respond to a collection of information by a Federal agency unless the collection displays a valid OMB control number. In compliance with these requirements, this notice announces that the following information collection request will be submitted OMB.

**Title:** FMVSS Considerations for Vehicles with Automated Driving Systems: Seating Preference Study

**OMB Control Number:** New

**Form Number(s):** NHTSA Forms 1624, 1625, and 1626

**Table 1: Forms to be Used in the Study**

NHTSA Form 1624	Eligibility Questionnaire - FMVSS Considerations for Vehicles with Automated Driving Systems: Seating Preference Study
NHTSA Form 1625	Demographic Questionnaire - FMVSS Considerations for Vehicles with Automated Driving Systems: Seating Preference Study
NHTSA Form 1626	Post Experiment Questionnaire - FMVSS Considerations for Vehicles with Automated Driving Systems: Seating Preference Study

**Type of Request:** New collection

**Type of Review Requested:** Regular

**Requested Expiration Date of Approval:** 3 years from date of approval

**Summary of the Collection of Information:**

49 U.S.C. 30181, 30182, and 30183 authorize the Secretary of Transportation (NHTSA by delegation) to conduct research, development, and testing programs, including activities related to new and emerging technologies that impact, or that may impact, motor vehicle safety. NHTSA proposes to collect information from the public regarding occupant/passenger seat preference in Automated Driving System-Dedicated Vehicles (ADS-DVs). Adults aged 18 and older will participate in an on-road study after giving informed consent. Participants will ride in one passenger vehicle and two ADS-DVs on a closed test track. Questionnaire data will be collected at the beginning and end of participation for each participant. Objective data will be collected via the data acquisition systems installed in each study vehicle. The data from each participant will be combined, stratified by demographic information and analyzed.

There are four information collections for the study. The (1) Eligibility Questionnaire will be used to identify eligible participants for this study; results from this questionnaire will not be kept or analyzed. Candidates who are selected for the study will participate in a single test-track experiment and will complete two additional questionnaires while participating in the experiment. The (2) Demographic Questionnaire will be used for description of the participant sample (e.g., number of males and females in the dataset, final age range for all participants, and driving experience range for all participants). This is necessary to compare the sample collected to the general driving population. The (3) objective data collected via data acquisition systems installed in each study vehicle during the test-track experiment is necessary for collecting information about participants' seat selection, any seat changes during the ride, seat belt use, and how participants interact with the HMI. The (4) Post Experiment Questionnaire will be used to analyze the perceptions and opinions of ADS-DV technology within the participant sample, as well as to gather any comments regarding their seat preference and seat belt use. This data will be used to determine how and why participants choose seating preferences in ADS-DVs.

## **Description of the Need for the Information and Proposed Use of the Information:**

The National Highway Traffic Safety Administration's (NHTSA's) mission is to save lives, prevent injuries, and reduce economic losses resulting from motor vehicle crashes. ADS technology is rapidly developing, and current Federal motor vehicle safety standards (FMVSS) and/or NHTSA guidance may need to be adapted to ensure this technology is deployed safely. Many of NHTSA's FMVSS focus on particular seating positions and thus, changes in seating preferences could impact those FMVSS. This study will provide NHTSA information about the seating preferences of occupants in vehicles that do not require a human driver in the left front seat. Several safety outcomes stem from occupant seating preference, which may change in the future as Automated Driving Systems (ADS) change seating configurations and the way people use vehicles. ADS-Dedicated Vehicles (ADS-DVs) are vehicles that lack manually operated driving controls, and therefore do not require a human driver or occupant to drive the vehicle or sit in the left front seat (the "driver's seat" in conventional vehicles). In conventional vehicles, there is the basic assumption that a human will always be in the left front seat while the vehicle is operating because a human driver would be necessary to operate those vehicles. ADS-DVs provide the opportunity for occupants to sit in any seat they choose in the vehicle. It is currently unknown where occupants may choose to sit when riding in an ADS-DV. Moreover, new seating configurations for occupants of ADS-DVs may necessitate changes to how and where information is presented to occupants about their responsibilities as occupants (e.g., closing doors, fastening seatbelts). Furthermore, occupants will need a human-machine interface (HMI) to provide input that they are ready for the ride to begin, or to request that the ride stop. At present, no standardized or otherwise commercially produced HMIs exist for this purpose. Therefore, in order to conduct the research, a prototype HMI will be developed. The two main goals for this study are to:

1. Describe the occupant distribution for ADS-DVs (i.e., seating distribution)

2. Use the prototype HMI to evaluate whether occupants would choose to initiate a ride in an ADS-DV without a seatbelt

**60-Day Notice:**

A Federal Register notice with a 60-day comment period soliciting public comments on the information collection was published on March 7, 2022 (87 FR 12772). NHTSA received one comment on the notice that did not address the information collection request or the seating preference study but instead addressed vehicle and road user safety in general. In addition to seeking public comment, NHTSA and the research team have publicized this study for a number of years across industry and consumer events. NHTSA has socialized this study through various means including discussion in the public-facing Annual Modal Research Plan FY2022-2023, discussion during the NHTSA Research Portfolio Fall 2022 public meeting, inclusion in a presentation at the 2021 SAE Government Industry Meeting, and discussion with industry stakeholders through individual meetings and association groups. Feedback regarding the study was positive and supportive and assistive in refinement of the study including the human machine interaction design and presentation.

**Affected Public:** Adults ages 18 and older who meet eligibility criteria such as holding a valid driver's license and having used a ride-sharing application at least once in the past year.

**Estimated Number of Respondents:** An expected total of up to 100 participants will be recruited to participate in the study. It is estimated that 200 respondents will be needed to identify 100 eligible participants.

**Frequency:** One-time collection

**Estimated Total Annual Burden Hours:** 268

The eligibility questionnaire will have a maximum of 28 questions and NHTSA estimates it will take approximately 20 minutes to complete. Therefore, NHTSA estimates the total time associated with completing eligibility questionnaires to be 67 hours (200 responses × 20 minutes = 66.7 hours). Study Intake (reading study information sheet and obtaining participant consent,

general study instruction) is expected to take 10 minutes to complete. Both the demographic and post-experiment questionnaires will have a maximum of 20 questions and NHTSA estimates that it will take each eligible participant 10 minutes to complete the demographic questionnaire and 10 minutes to complete the post-experiment questionnaire. Therefore, NHTSA estimates the total burden for Study Intake to be 17 hours (100 responses  $\times$  10 minutes = 16.67 hours), Demographic Questionnaire to be 17 hours (100 responses  $\times$  10 minutes = 16.67 hours), and the Post Experiment questionnaire to be 17 hours (100 responses  $\times$  10 minutes = 16.67 hours). Study participation (e.g., riding in study vehicles on the test track) is expected to take 90 minutes. The total burden hours for study participation are calculated to be 150 hours (100 responses  $\times$  90 minutes = 9,000 minutes = 150 hours). Accordingly, NHTSA estimates the total burden hours for this information collection to be 268 hours. Data collection will take less than one year.

The table below shows the estimated burden hours for this information collection, which accounts for the maximum number of expected responses and drop-outs.

**Estimated Burden Hours**

<b>Instrument</b>	<b>Maximum Number of Respondents</b>	<b>Estimated Individual Burden</b>	<b>Total Estimated Burden Hours</b>
Eligibility Questionnaire	200	20 minutes	67 Hours
Study Intake	100	10 minutes	17 Hours
Demographic questionnaire	100	10 minutes	17 Hours
Study Participation	100	90 minutes	150 Hours
Post Experiment Questionnaire	100	10 minutes	17 Hours
<b>Total</b>			<b>268 Hours</b>

**Estimated Total Annual Burden Cost:** The only cost burdens respondents will incur are costs related to travel to and from the study location. The costs are minimal and are expected to be offset by the honorarium that will be provided to all research participants.

**Public Comments Invited:** You are asked to comment on any aspects of this information collection, including (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Department, including whether the information will have practical utility; (b) the accuracy of the Department's estimate of the burden of the proposed information collection; (c) ways to enhance the quality, utility and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including the use of automated collection techniques or other forms of information technology.

**Authority:** The Paperwork Reduction Act of 1995; 44 U.S.C. Chapter 35, as amended; 49 CFR 1.49; and DOT Order 1351.29.

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